

when barley yields hit a 12-year low of 1.18 tons per hectare). An increasing share of area is being planted to malting varieties, which are relatively more profitable because of increased international demand and the availability of other grains for feeding. Key to the future growth of Australia's malting barley exports will be the development of new varieties, especially as the Chinese market becomes more discriminating.

Barley, like wheat, is a winter crop in Australia (May-October dormancy/growing season), while sorghum, corn, oats, rice, and cotton are summer crops (October-April growing season).

Farm Income Prospects Dampen

The bright 1996/97 crop outlook belies Australia's declining farm income prospects. International prices have dropped steadily from the highs in May. Favorable weather during the growing season (May-September) improved yield prospects at the same time that increases in wheat output were forecast for Argentina, another major Southern Hemisphere wheat exporter. The pool price for the benchmark Australian standard white 10-percent protein was set recently at A\$175 per ton (US\$3.81 per bushel), down sharply from A\$195 in September and from still higher prices at planting.

Along with reduced returns in the livestock sector, and an appreciating Australian dollar (reducing export-dependent revenues still further), the wheat price setback means that 1996/97 returns to farm operations could fall 25 percent from last year. Returns would still be well above the drought-reduced 1994/95 level.

Over the longer term, wheat output gains are forecast to be modest, mainly because of the higher returns forecast for wool in the next few years. Wheat exports are forecast to continue to gain as world grain trade is liberalized, and as global economies and populations continue to grow.

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Dairy Policies Are Limiting U.S.-Canada Trade

When Canada and the U.S. replaced strict import quotas on dairy products with tariff-rate quotas, to comply with the GATT Uruguay Round agreement, it raised an apparent contradiction with U.S.-Canada trade obligations under the North American Free Trade Agreement (NAFTA).

Under tariff-rate quotas (TRQ's), a country allows goods below a specific quantity (quota) to be imported at a lower tariff rate, while over-quota quantities enter at a higher rate. Canada's over-quota rates on dairy, poultry, egg, and barley products reach 200-350 percent for some dairy products. The U.S. also protects its dairy industry with some tariff-rate quotas, but over-quota tariffs are lower than Canada's.

While U.S. access to Canadian markets for these products improved with the implementation of the U.S.-Canada Free Trade Agreement (FTA) in 1989, it has remained limited. The FTA was expanded into NAFTA in 1994, encompassing Mexico as well as the U.S. and Canada, with separate bilateral agreements on market access for agricultural products. A year later, on January 1, 1995, tariff-rate quotas on imports to Canada and the U.S. went into effect with implementation of the Uruguay Round (UR) agreement.

Using the dispute settlement process provided in NAFTA, the U.S. requested consultations with Canada, which were held in March 1995. The two countries subsequently presented written and oral arguments to a five-member NAFTA panel to resolve the dispute. On December 2, 1996, the panel issued its final report, finding that Canada's application of these new tariffs to U.S. goods does conform with its NAFTA obligations. Conse-

quently, U.S. access to Canadian markets for dairy, poultry, eggs, margarine, and barley products remains unchanged. There is no appeal process in NAFTA's dispute settlement mechanism.

The U.S. position, put forward by the U.S. Trade Representative, is that under NAFTA, neither country may impose higher tariffs on imports from the other country than tariffs that were agreed to under the FTA. The U.S. has also argued that each country must eliminate tariffs in accordance with the FTA, and nontariff barriers on trade in these products. Canada's view, articulated by the Department of Foreign Affairs and International Trade, is that it had a right to convert nontariff barriers to TRQ's under the World Trade Organization and to apply those TRQ's to all WTO members, including the U.S.

Because the dairy sectors in both countries are supported, trade issues involving dairy are particularly sensitive, and trade between these two countries is limited.

In both countries, the level of support for dairy products is high compared with support levels for most other agricultural commodities. The level of support (i.e., producer subsidy equivalent) for milk averaged 69 percent in Canada during 1980 to 1995, compared with 58 percent in the U.S. In contrast, the aggregate level of support in 1995 for wheat, for example, was 29 percent in Canada and 23 percent in the U.S.

Border measures have been used to maintain the effectiveness of dairy income support policies in both countries by limiting competition from imported products. In 1996, Canadian over-quota tariffs were 343 percent for butter, 275 percent for cheese, and 270 percent for milk and cream. This compares with a level of around 100 percent for the U.S. These over-quota tariffs effectively stifle large flows of dairy products.

As part of the Uruguay Round agreement, Canada's tariffs rates are scheduled to decrease by at least 15 percent over a period of 6 years. Canada has indicated that the over-quota tariffs for these three

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commodities would fall to 299, 246, and 241 percent by 2001. In addition, Canada is increasing some tariff-rate quotas marginally from 3 to 5 percent of its domestic consumption by 2001. But this action, also a WTO commitment, is not expected to result in a significant increase in imports.

Despite the border measures, two-way trade in dairy products has been increasing between the U.S. and Canada. In 1990 two-way trade totaled \$65 million, and had increased to \$140 million in 1995. During the 1990's, the U.S.—with its larger production base and lower dairy prices—has been a net exporter of dairy products to Canada.

U.S. dairy exports to Canada totaled \$35 million in 1990. In 1995, U.S. dairy exports jumped to \$71 million, and totaled \$70 million in only the first 9 months of 1996. While the value of U.S. cheese exports has increased slightly, most of the growth in U.S. dairy product exports in recent years has been in exports of whey and casein (milk protein). U.S. dairy exports to Canada are about 10 percent of total U.S. dairy exports.

U.S. dairy products exported to Canada accounted for nearly 27 percent of the Canadian import market in 1995, second to shipments from the European Union (EU). Cheese represents nearly two-thirds of total Canadian dairy products imported in 1995. The U.S. competes with Australia and New Zealand in the cheddar cheese market. While the U.S. supplies almost all ice cream and whey products, the EU is Canada's dominant supplier of specialty cheese. New Zealand is a major supplier of whole milk powder.

U.S. imports of dairy products from Canada have also trended up during the 1990's, showing particularly significant increases in 1995 and 1996. Imports jumped to \$69 million in 1995 from \$50 million the previous year, and are already over \$70 million for the first 9 months of 1996.

Cheese imports from Canada hit a record level of \$12 million in 1995, and exceeded \$8 million for the first 9 months of 1996. Imports from Canada of milk powders and formulas, mixes and doughs containing dairy products, and milk protein concentrates have also increased

significantly in the last 2 years. Canada accounts for only about 2 percent of U.S. dairy product imports—Western Europe is by far the leading U.S. supplier.

Canadian Policy Restricts Milk Output

The main components of Canada's dairy policy are production restrictions, administered prices, import controls, and direct payments. In Canada, the national supply management program establishes production quotas—which are traded within each province—for each province and each producer. These supply restrictions, coupled with import control, means that the cost of the dairy program in Canada is borne mostly by the consumer through higher prices. In addition, the taxpayer bears the cost of direct payments to producers, but these payments are being eliminated.

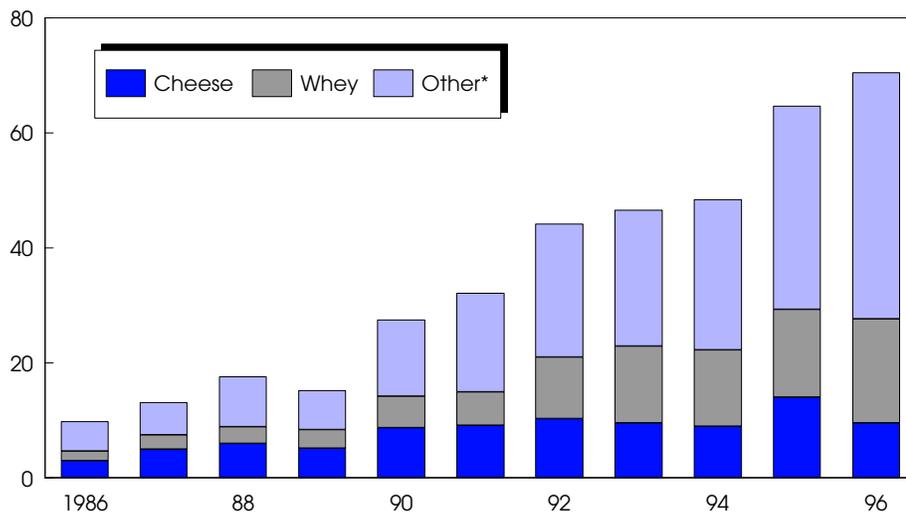
The major difference between the Canadian and U.S. programs, besides higher Canadian second-tier tariffs, is that Canada limits production, setting prices and production quotas in the fluid and manufacturing milk markets. In addition, Canadian policies reflect a shared responsibility between the provincial and federal governments.

Production control in Canada is based on estimates of domestic needs. The Canadian Milk Supply Management Committee sets the expected requirements for the domestic market plus a small export program, on a butterfat basis. A national production target is divided among the provinces, which allocate their share to producers according to provincial rules.

The marketing of industrial milk is a joint federal-provincial jurisdiction. The federal Canadian Dairy Commission (CDC), on behalf of the Canadian government, cooperates with the provinces in managing policy for industrial milk by setting production quotas, support prices for various dairy products, and the target price for industrial milk. Industrial milk accounts for about 60 percent of raw milk delivered in Canada. The CDC sets the target price for industrial milk to cover dairy farmers' cost of production, and

U.S. Dairy Exports to Canada Have Expanded in the 1990's

\$ million



1996 forecast.

*Mostly ice cream and yogurt.

Economic Research Service, USDA

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supports that level of return through its commitment to purchase butter and skim milk powder at acquisition prices. The target price is used to calculate direct subsidies paid to producers.

Each province, usually through a milk marketing board, controls production and milk marketing with pricing formulas, production quotas, and other regulations. Each province administers its own prices in accordance with the federal target price. The price processors pay for industrial milk—which depends on the end use—is set by provinces and based on support prices for butter and skim milk powder established by the CDC. The current target price is Can\$54.23 per hectoliter for industrial milk, and the acquisition price is Can\$5.324 per kilogram for butter and Can\$4.203 for skim milk powder.

Provinces operate their own supply management scheme for fluid milk. Again, a milk marketing board controls fluid milk production through quotas and prices, which are set by the provinces. In 1995, prices ranged from Can\$58.18 per hectoliter in Saskatchewan to Can\$77.48 in Newfoundland. The price paid for fluid milk is higher than the price for industrial milk. Fluid milk is marketed only in the province where it is produced, in contrast with the U.S., where fluid milk can be marketed across state lines.

To reduce federal spending, the federal dairy subsidy budget for Canada was first cut 15 percent on August 1, 1995 and again on August 1, 1996 by another 15 percent. The direct subsidy was Can\$4.61 per hectoliter on August 1, 1995, down to Can\$3.80 on August 1, 1996. In its 1996/97 budget, the Canadian government announced that these dairy subsidies will be phased out over a 5-year period, which could result in lower returns to producers. The elimination of dairy subsidies is not expected to have a significant effect on aggregate production and trade, because consumers bear the vast majority of the support.

In an attempt to comply with WTO disciplines on export subsidies, the Canadian government also replaced a producer-financed export subsidy system with a

new pricing and revenue pooling system for the manufacturing dairy sector. This new system of Special Milk Classes came into effect on August 1, 1995. The new system was developed so that Canadian food processors who use dairy inputs, and exporters of dairy-based products, could purchase their inputs at competitive prices and therefore export competitively.

Under the new system, revenues from the sale of industrial milk used in producing items in these Special Classes are pooled across provinces with revenue from the sale of the milk used domestically. The CDC administers the program by issuing permits to processors which allow them to purchase milk at the lower Special Class prices.

The Special Classes cover some foods containing dairy products sold domestically, such as frozen pizzas with cheese, since imports of those products are not protected by TRQ's. Other Special Classes are specifically designated for products for export. The effect is to implement a two-tier pricing structure, in which the price for milk used to produce exported food products is lower than the price for milk used for the same products sold on the domestic market.

The U.S. and other countries have expressed concern to Canada that this program serves to subsidize exports. Canada has consistently denied that it is subsidizing exports. Informal consultations were held in late November at the WTO to gather further information on the Special Milk Classes program and to determine whether Canada's shift from a producer-financed subsidy system to this end-use pricing scheme has affected dairy product exports. New Zealand, the U.S., and Australia posed the majority of the questions to Canada and await responses to some of the more technical concerns.

U.S. Milk Price Support Declines

Under the 1996 Farm Act, the U.S. dairy support program, provided through government purchases of dairy products, will be phased out over the 1996-99 period. The other components of the U.S. dairy program are the Federal milk marketing

order (FMMO) system, domestic feeding programs, tariff-rate quotas, and export programs.

The stated purpose of the geographically structured FMMO is to supply an adequate amount of fluid milk at reasonable prices. It was instituted in the 1930's to provide some market power to producers as returns fluctuated due to the seasonal nature of milk supply and demand. Each geographic marketing order specifies the minimum price that must be paid by handlers/processors to farmers for milk in each class.

Specifically, there are three or four classes of milk under the FMMO's: Class I (fluid milk), Class II (ice cream, yogurt, and other soft products), and Class III (cheese and butter). Ten orders place nonfat dry milk in Class III while the remaining orders place nonfat dry milk in a separate Class III-A. Class I milk receives the highest prices, reflecting the additional cost of producing and marketing milk for fluid use including the cost of moving milk from surplus to deficit areas. The FMMO system increases total producer revenue by setting higher prices in the fluid milk market, where consumers are less sensitive to higher prices.

Under the 1996 Farm Act, the FMMO's will be consolidated from the current 32 market orders to 10-14, allowing for California. (USDA recently suggested 10 orders and has invited industry and public comment on the proposal.) Consolidating milk marketing orders will expand the size of the area where dairy farmers compete, and thus might have regional price impacts by raising prices for some farmers while reducing prices for others.

USDA, through the Commodity Credit Corporation, supports the price dairy farmers receive from processors for their milk by offering to purchase butter, nonfat dry milk, and cheese from processors at announced purchase prices. The prices are calculated by combining the support price quoted for manufacturing grade milk, plus manufacturing allowances (to cover processors' manufacturing and marketing costs) so that processors can pay, on average, the quoted support price to milk producers.

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Products purchased by the government under the support program are committed to specific uses or put into storage. Uses include international food assistance and domestic feeding programs (e.g., the School Lunch Program), direct export sales, and sales to the domestic industry if the market price of the products is 10 percent higher than the purchase price.

Under the 1996 Farm Act, the support program will be phased out over the 1996-99 period. Support prices for milk will decline by \$0.15 a year from \$10.35 per cwt to \$9.90. After December 31, 1999, the CCC will provide recourse loans to commercial processors (borrower must repay the loan with interest), on butter, nonfat dry milk, and cheddar cheese at prices that yield a milk price of \$9.90 per cwt. The loans are initially granted through the end of the fiscal year, but they may be extended through the end of the following fiscal year. The effect of these loans is simply to provide subsidized interest rates and short-term liquidity, and to smooth out seasonal variation in product prices.

Several programs are designed to increase demand for dairy products. The Federal government provides vouchers for dairy products under the Women and Infant Children program. The government also requires that fluid milk be offered with all school lunches. The Dairy Export Incentive Program (DEIP) subsidizes exports of U.S. dairy products in overseas markets. The level of DEIP is limited under the Uruguay Round (UR) agreement, declining over the next 5 years. Under the Farm Act, the Secretary of Agriculture must maximize the level of DEIP allowed under the UR agreement. In addition, there are loan guarantee programs that facilitate dairy product exports.

Cost of Production Is Lower in the U.S.

The total cost of milk production is about one-quarter lower, on average, in the U.S. than in Canada. The larger average herd size of U.S. dairy farms reduces average fixed costs per unit of output. The average herd size in the U.S. is about 57

cows, compared with 43 in Canada. A dairy farm with 100 cows, considered to be moderately sized in the U.S., is large by Canadian standards.

Canada's dairy operations are located largely in the provinces of Quebec and Ontario. South of the border, about 20 to 25 percent of U.S. milk output is produced in the New England and mid-Atlantic area. Dairy farms in this region tend to be the smaller, more traditional U.S. dairy farms, with 50 to 100 cows, although some farms in New York and Pennsylvania have more than 1,000 cows.

The U.S. and Canada share some of the same natural resources in the border areas where milk production is located. In the absence of regulation, the industries would look similar in these regions. The difference in the size and structure of the dairy industries in the two countries reflects more of a difference in policy, which tends to limit size and increase costs of dairy operations in Canada, than in resources.

Competitiveness between the two countries is regional in nature. The northeastern part of the U.S.—adjacent to Canada's largest production region—is one of the highest dairy production cost areas in the U.S. This indicates that the Canadian sector does not have to reduce its cost of production to match average U.S. production costs. Simply moving towards the average cost in the northeastern U.S. would keep Canada competitive.

Processing operations in Canada face the same problems that keep farm-level costs higher than in the U.S. Inefficiencies due to the supply control program, and inter-provincial regulations (e.g., setting processing profit margins and the quantity of milk shipped to processing plants) boost final product costs. While there is little difference between the U.S. and Canada in the cost of processing fluid milk, the U.S. has about a 20-percent cost advantage in the production of other dairy products.

The Scenario Under Reduced Border Protection

If the U.S. and Canada were to reduce bilateral trade barriers for dairy products, each government would have to adjust domestic policies to deal with the new trade flows, particularly if fluid milk is allowed to flow across the border. Both support programs depend on the ability to limit dairy imports.

For the U.S., adjustments would have to be made in the FMMO system to cope with potential changes in supply. The ability of the U.S. to maintain a pricing system that sets different prices for different uses of milk would be difficult. An increase in milk imports at prices lower than Class I would impact those areas closest to the border, especially in the large population areas of the northeastern U.S. However, the 1996 Farm Act is phasing out the U.S. price support program for dairy products, which will make the U.S. dairy industry more competitive.

On the other hand, Canada could not maintain its current program of supply control with an open border to the U.S. Initially an open border would lead to an increase in U.S. dairy exports, forcing the Canadian government to adjust its dairy support policies. Any negative effects from a policy adjustment would be borne by Canadian dairy producers because the high levels of economic rent—revenue in excess of returns in a competitive market—would disappear, as would the asset value of their quotas.

The Canadian sector would move to larger, more efficient dairies, a shift that has been constrained by the supply management system and quota transfer system. Some argue that a movement toward larger dairies would not be difficult from a production standpoint. However, there would be a larger reduction in the number of dairy farmers in Canada. Expansion in many areas in Canada would simply require increasing herd size and boosting labor input—both relatively easy to do. The high level of income support over the years has resulted in a buildup of unused production capacity in the dairy sector.

Reduced Canadian border protection for U.S. dairy products, which would likely

be accompanied by changes to its domestic supply control program, does not guarantee continued higher U.S. exports. Without supply control, Canadian production would increase and milk prices would decline, affecting imports.

Given regional cost differences in the two countries, there would likely be higher dairy trade in the long run between the two countries in the absence of border protection. But net trade may not change dramatically as east-west flows of dairy products across each country are replaced by north-south flows across the border.

The natural trading flow without political boundaries would be south to north. The Pacific Northwest is a good example, with the cost of dairy production lower in Washington State than in British Columbia. Dairy products from Washington would have a location cost advantage due to lower transportation costs compared with eastern Canada. In other regions, such as the northeastern U.S. where variable costs of production are high, (as are those in Ontario and Quebec), reduced trade barriers could result in increased trade from eastern Canada to the northeastern U.S. for some products.

Canada is making some adjustments to improve processing industry competitiveness, such as providing inputs at competitive prices. If the dairy industries of both countries became more efficient as a result of a more open North American border and changes in domestic policies, there would be less need for border protection with other countries. But as long as the dairy sectors remain highly supported, border protection is a necessary complement to domestic policies.

Most economic research on dairy policies has focused on U.S. and Canadian producers, especially those that would face an extremely competitive situation without existing policies. However, the clear winners of increased trade between the countries would be consumers in both countries, who would pay lower prices. [Suchada Langley (202) 219-0006, Richard Stillman (202) 219-0844, and Leanne Hogie (202) 720-1314; slangley@econ.ag.gov; stillman@econ.ag.gov; hogie@fas.usda.gov] **AO**

Argentina & Brazil: Key Players in New Trade Bloc

The agricultural economies of Argentina and Brazil are becoming more efficient and are likely to remain challenging competitors in the global agricultural market. Domestic reforms in the past few years, such as reducing and eliminating export taxes on agricultural products and reducing import taxes on farm inputs, are increasing production efficiency.

In addition, the new Southern's Common Market—known as MERCOSUR—has eliminated most tariffs on products traded among its members (Argentina, Brazil, Uruguay, and Paraguay). This regional liberalization of trade is solidifying gains from domestic policy reforms. Together these developments, along with relatively buoyant farm prices, are boosting prospects for increasingly competitive agriculture industries in Argentina and Brazil.

Moreover, the economic climate has generated more foreign direct investment in both Brazil and Argentina's food and agricultural sectors. The free flow of most goods within MERCOSUR has created powerful incentives for firms to base production facilities locally from which to supply the region.

MERCOSUR is providing a springboard to further economic integration with other countries in the region and the world. The recent inclusion of Chile in a free trade agreement with MERCOSUR is the latest chapter in the fast-moving drama of regional integration. Trade agreements are on the horizon with other countries in the Western Hemisphere and the European Union. At the Summit of the Americas held 2 years ago in Miami, for example, all the Western Hemisphere's democratically elected leaders agreed to set up a Free Trade Area of the Americas by the year 2005.

MERCOSUR Eliminates Most Internal Tariffs

Trade between MERCOSUR's largest members has blossomed to record levels following elimination of most internal tariffs. Total bilateral trade between Argentina and Brazil mushroomed to \$9.7 billion in 1995, up almost fivefold in 5 years.

Argentina's total exports to Brazil climbed significantly to \$5.5 billion in 1995, almost four times the 1990 level. Agricultural exports, primarily wheat, dairy products, corn, deciduous fruit, and rice, accounted for nearly 40 percent of Argentina's total exports to Brazil in 1995. Brazil's total exports to Argentina for 1995 likewise rose to \$4.2 billion, over five times the level of 1990. Agricultural exports account for under 10 percent of Brazil's total exports to Argentina, with coffee and sugar the major items traded last year.

The establishment of MERCOSUR in January 1995 signaled the end of an era of inward-looking policies. The agreement was the culmination of a process started in the late 1980's when both Argentina and Brazil began to open their economies and moved away from import substitution and development-at-any-cost policies.

Negotiations aimed at reaching full common market status by the year 2000—with labor and capital also flowing freely—continue. However, to reach full common market status, the coordination of at least labor and capital policies—certainly still an ambitious task—must be achieved in addition to tariff elimination. MERCOSUR's size and its potential for growth give it considerable stature during future international trade negotiations.

The current MERCOSUR agreement dismantles most intra-regional tariffs, harmonizes internal tariff codes, and provides procedures to eliminate nontariff barriers. About 80 percent of all products traded now have duty-free status within the bloc. The agreement also establishes a common external tariff (CET) that applies to imports from third countries. The average CET of MERCOSUR is